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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,080	03/26/2001	A-jung Kim	030681-291	7143

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EXAMINER

DADA, BEEMNET W

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/816,080

Applicant(s)

KIM, A-JUNG

Examiner

Beemnet W. Dada

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. This office action is in reply to an amendment filed on January 19, 2006. Claims 1-6 are pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Mayers et al US Patent 6,678,379 B1 (hereinafter Mayers).

4. As per claim 1, Mayers teaches a key agreement method for secure communication in a multiple access system, the key agreement method comprising the steps of:

(a) a first user encoding a signal from a source by a bit sequence and transmitting the signal [column 9, lines 8-16];

(b) a second user who is a legitimate counterpart of the first user decoding the transmitted signal and measuring the decoded signal [column 9, lines 15-20];

(c) the second user adopting only bits, on a bit-by-bit basis, having the measured value beyond the threshold value which is predetermined (i.e., keeping bits that constitute predetermined sets of bases and discarding other bits) [column 9, lines 21-36 and column 6, lines 39-62];

(d) the second user informing the first user that the bits adopted are the n-th bits in the transmitted bit sequence, not telling the values of the bits (i.e., without telling the measurement results) [column 9, lines 21-23 and 29-40]; and

(e) the first and second users taking the adopted bits as a key string, and discarding the remaining bits [column 9, lines 21-44].

5. As per claim 2, Mayers further teaches the method further comprising the steps of:

(f) selecting a subset of bits from the key string shared by the first and second users and checking errors, if the error rate obtained in (f) is below a tolerable level, considering the transmission safe, accepting the key string and obtaining a refined key string with amplification such as error correction process; and discarding the key adopted in the step (e) if the error rate obtained in (f) exceeds the tolerable level, returning to the step (a) and performing (a) through (f) until getting the key string which satisfies the condition (g) [column 8, lines 65 – column 9, lines 20].

6. As per claim 3, Mayers further teaches the method wherein the signal transmitted in the step (a) is susceptible to noise [column 9, lines 2-6].

7. As per claim 4, Mayers further teaches the method wherein the second user uses a receiver affected by mutual modulated noise by another transmitter [column 8, lines 46-60].

8. As per claim 5 and 6, Mayers further teaches the method wherein the threshold value of the step (c) is determined by the second user considering at least a transmission rate, a

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transmission error rate, and a degree of security [column 6, lines 39-32 and column 9, lines 1-10].

### ***Response to Arguments***

9. Applicant's arguments filed January 19, 2006 have been fully considered but they are not persuasive. Applicant argues that Mayers fails to teach the limitations where the second system adopts only those bits having a measured value beyond a threshold value. Applicant further argues that in Mayers, both the sending and receiving parties are involved in the testing procedure. Examiner disagrees.

Examiner would point out that Mayers teaches a key distribution method including adopting only bits having a measured value which beyond a threshold value which is predetermined (i.e., keeping bits that correspond to cases where selected bases constitute one of the four set of bases, and if all results are within an error rate that is tolerable range, see column 8, lines 65-column 9, line 36). Examiner would further point out that Mayers teaches the second user informing the first user that the bits adopted are the n-th bits in the transmitted bit sequence, not telling the values of the bits (i.e., without telling the measurement results) [column 9, lines 15-23 and 29-40]. Examiner asserts that Mayes teaches the claim limitations and therefore the rejection is respectfully maintained.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beemnet W. Dada whose telephone number is (571) 272-3847. The examiner can normally be reached on Monday - Friday (9:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Beemnet Dada

March 30, 2006

  
HOSUK SONG  
PRIMARY EXAMINER